

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. (Currently Amended) A method of organizing data in a storage device, comprising:
2 receiving data in the storage device;
3 transforming the received data into ~~a first data object~~ plural data objects; ~~[[and]]~~
4 storing the ~~first data object~~ plural data objects in ~~[[a]]~~ corresponding plural hierarchical
5 data ~~structure~~ structures, each of the hierarchical data ~~structure~~ structures containing plural levels
6 of data objects; and
7 receiving an access request containing an identifier of one of the hierarchical data
8 structures.

1 2. (Currently Amended) The method of claim 1, wherein the received data is associated
2 with information describing the received data, and ~~[[the]]~~ each hierarchical data structure
3 contains plural levels of interconnected nodes, each node representing a respective data object,
4 wherein storing ~~the first data object~~ a particular one of the data objects in the corresponding
5 hierarchical data structure comprises storing the ~~[[first]]~~ particular data object as one of the nodes
6 of the corresponding hierarchical data structure based on the information describing the received
7 data.

1 3. (Currently Amended) The method of claim 2, wherein receiving the data comprises
2 receiving ~~a file~~ files each having a header portion containing the information describing the
3 received data.

1 4. (Currently Amended) The method of claim 1, wherein the received data is associated
2 with information describing the received data, and
3 wherein different portions of ~~[[the]]~~ each hierarchical data structure represent different
4 categories of data, and wherein storing ~~the first data object~~ a particular one of the data objects in
5 the corresponding hierarchical data structure comprises storing the ~~[[first]]~~ particular data object
6 in one of the different portions of the corresponding hierarchical data structure based on the
7 information describing the received data.

1 5. (Cancelled)

1 6. (Currently Amended) The method of claim [[5]] 1, wherein the plural hierarchical data
2 structures are distinct hierarchical data structures to store respective different groups of data,
3 wherein storing data objects in respective ones of the distinct hierarchical data structures is based
4 on respective types of data contained in the data objects.

1 7. (Currently Amended) The method of claim 1, wherein receiving the data comprises
2 receiving plural files, wherein transforming the received data into plural data objects comprises
3 transforming the files into plural respective data objects ~~a first file, and the hierarchical data~~
4 ~~structure comprises a first hierarchical data structure, the method further comprising:~~
5 ~~receiving a second file in the storage device;~~
6 ~~transforming the second file to a second data object; and~~
7 ~~storing the second data object in a second hierarchical data structure.~~

1 8. (Currently Amended) The method of claim 7, wherein each of the ~~first and second~~ files
2 contains metadata to describe data contained in the respective one of the ~~first and second~~ files,
3 wherein storing each of the ~~first and second~~ data objects in a respective one of the ~~first~~
4 ~~and second~~ hierarchical data structures is based on the metadata associated with a respective one
5 of the ~~first and second~~ files.

1 9. (Currently Amended) An article comprising at least one storage medium containing
2 instructions that when executed cause a storage controller of a storage device to:
3 receive [[data]] files for storage in the storage device, wherein the received ~~data is~~ files
4 are each associated with metadata;
5 transform the received [[data]] files into ~~a first data object~~ respective data objects; and
6 store the ~~first data object~~ data objects in ~~a data structure~~ respective plural hierarchical
7 data structures, [[the]] each hierarchical data structure having plural portions for storing plural
8 respective categories of data objects,
9 wherein ~~the first data object~~ a particular one of the data objects is stored in one of the
10 plural portions of the corresponding hierarchical data structure based on the metadata; and
11 receive an access request containing an identifier that identifies one of the hierarchical
12 data structures.

1 10. (Currently Amended) The article of claim 9, wherein ~~the data structure comprises a each~~
2 hierarchical data structure ~~having~~ has plural interconnected nodes, each node representing a
3 corresponding data object,
4 wherein storing the [[first]] particular data object comprises storing the [[first]] particular
5 data object as one of the nodes in the corresponding hierarchical data structure based on the
6 metadata.

1 11. (Currently Amended) The article of claim 10, wherein receiving the [[data]] files
2 comprises receiving ~~a file~~ files each having a header portion containing the metadata.

1 12. (Cancelled)

1 13. (Currently Amended) The article of claim [[12]] 9, wherein [[the]] a first [[file]] one of
2 the files is associated with metadata indicating a category of data in the first file, and [[the]] a
3 second [[file]] one of the files is associated with metadata indicating a category of data in the
4 second file,

5 wherein storing the ~~first and second~~ data objects in respective ~~first and second~~
6 hierarchical data structures is based on the respective metadata.

1 14. (Cancelled)

1 15. (Currently Amended) The article of claim [[14]] 26, wherein the instructions when
2 executed cause the system to apply the ~~function~~ software routine to the data object ~~in response to~~
3 ~~a request to access the data object~~ to be accessed by the access request.

1 16. (Currently Amended) A system comprising:

2 a storage to store ~~[[a]] hierarchical data structure~~ structures, ~~[[the]] each~~ hierarchical data
3 structure containing plural levels of data objects;

4 a module to receive data; and

5 a controller to transform the received data into ~~a first data object~~ plural data objects, and
6 to store the ~~first data object~~ plural data objects in ~~[[the]]~~ corresponding hierarchical data ~~structure~~
7 structures; and

8 the controller to receive plural access requests containing identifiers of different ones of
9 the hierarchical data structures.

1 17. (Currently Amended) The system of claim 16, wherein ~~the storage is to store plural~~
2 ~~hierarchical data structures~~, the controller is to store the ~~first data object~~ data objects in ~~one of the~~
3 ~~plural~~ corresponding hierarchical data structures based on metadata associated with the received
4 data.

1 18. (Cancelled)

1 19. (Currently Amended) The system of claim 17, wherein the received data comprises a
2 ~~first file, and the data object comprises a first data object, the module to further receive a second~~
3 ~~file plural files,~~ and the controller is to transform the ~~second file plural files~~ to a ~~second data~~
4 ~~object corresponding data objects,~~ each of the ~~first and second~~ files associated with respective
5 metadata,

6 the controller to further store [[the]] a first one of the data object objects in a first one of
7 the hierarchical data structures based on the respective metadata indicating that the first file
8 contains data belonging to a first category, and

9 the controller to further store [[the]] a second one of the data object objects in a second
10 one of the hierarchical data structures based on the respective metadata indicating that the second
11 file contains data belonging to a second category.

1 20. (Currently Amended) The system of claim 16, wherein the received data is associated
2 with information describing the received data, and [[the]] each hierarchical data structure
3 includes plural portions to store different categories of data,

4 the controller to store ~~the first data object~~ a particular one of the data objects in one of the
5 plural portions of the corresponding hierarchical data structure based on the information
6 associated with the received data that indicates a category of the received data.

1 21. (Currently Amended) The system of claim 16, wherein the received data is associated
2 with information to indicate a category of the received data, and the hierarchical data structure
3 comprises a tree of interconnected nodes,

4 the controller to store [[the]] a corresponding data object in the hierarchical data structure
5 as a node in the tree of interconnected nodes based on the information indicating the category of
6 the received data.

1 22. (New) The method of claim 1, further comprising:

2 in response to the access request containing the identifier, accessing the one of the
3 hierarchical data structures to perform an access specified by the access request.

1 23. (New) The method of claim 1, wherein receiving the access request comprises receiving
2 one of a read request containing the identifier and a write request containing the identifier.

1 24. (New) The method of claim 1, wherein receiving the access request comprises receiving
2 the access request containing a field to access a software routine for manipulating a data object
3 that is to be accessed in response to the access request.

1 25. (New) The article of claim 9, wherein the instructions when executed cause the storage
2 controller to further access the one of the hierarchical data structures in response to the access
3 request to access a data object in the one of the hierarchical data structures.

1 26. (New) The article of claim 9, wherein the access request further contains a field to access
2 a software routine for manipulating a data object to be accessed in response to the access request.

1 27. (New) The system of claim 16, wherein the controller is to further access different data
2 objects in different hierarchical data structures in response to the identifiers of the access
3 requests.

1 28. (New) The system of claim 16, wherein each access request further contains a field to
2 invoke a respective software routine for manipulating a respective data object to be accessed in
3 response to the access request.